A Cultural Resources Survey of the Proposed Cedar Bayou to Morgan's Point Pipeline Project, Within Parcel TX-HR-0004.00000 (Hog Island) Harris County, Texas.
A CULTURAL RESOURCES SURVEY OF THE PROPOSED CEDAR BAYOU TO MORGAN'S POINT PIPELINE PROJECT, WITHIN PARCEL TX-HR-0004.00000 (HOG ISLAND) HARRIS COUNTY, TEXAS

TEXAS ANTIQUITIES PERMIT NO. 6614

Prepared for:
Enterprise Products Operating LLC
1100 Louisiana Street
Houston, Texas 77002

Prepared by:
Atkins
1250 Wood Branch Park Drive
Suite 300
Houston, Texas 77035

Principal Investigator:
Dale Norton, MA

Report Author:
J. Philip Washington, MA

August 2013
Management Summary

On August 5, 2013, Atkins North America, Inc. (Atkins) conducted a cultural resources survey of the Hog Island portion of the proposed Cedar Bayou to Morgan's Point Pipeline Project in Harris and Chambers Counties, Texas, at the request of Enterprise Products Operating LLC (Enterprise). The proposed two new main line 20-inch diesel pipelines are approximately 12.88 kilometers (8 miles) in length and two new 20-inch auxiliary diesel pipelines are each approximately 4.83 kilometers (3 miles) in length, paralleling a section of the main lines.

The portion of the project area that was surveyed for cultural resources under Texas Antiquities Permit No. 6614 was on Hog Island, owned by the Port of Houston Authority. This area consisted of both temporary and permanent workspaces associated with the proposed utilization of a horizontal directional drill (HDD). The proposed subsurface impacts are confined to the drill box and are approximately 21 meters (70 feet) below the ground surface. Only vegetation-clearing activities will be performed in the eastern and southern stringing areas, and no deep impacts are anticipated to be associated with them. In total, approximately 2.92 acres were surveyed for cultural resources in the area of the proposed HDD drill box and associated pipe-stringing areas. No areas within these workspaces were excluded from the survey. An intensive cultural resources survey including shovel testing, auger probes, and surface inspection was conducted across the entire area. Additionally, the surveyed area and adjacent vicinities were inspected for nonarchaeological historic resources including any historic buildings or structures. The cultural resources field investigation was conducted by Atkins archaeologist J Philip Washington. Dale Norton served as the Principal Investigator and J Philip Washington served as Project Archeologist. The fieldwork took 8 person-hours to complete.

Site 41HR681 was revisited during the survey; however, no cultural resources were located and no artifacts were collected. Due to the low geoarchaeological potential for intact buried cultural deposits, the presence of dredge spoil throughout the survey area, and disturbed soils due to past construction activities associated with the Goose Creek oil and gas field facilities, the probability for stratigraphically intact archaeological sites is extremely low in the majority of the area surveyed. The minimum number of shovel tests recommended in state guidelines for projects of this size was not met due to the presence of low-lying, frequently or currently inundated areas covering the majority of the southern and eastern stringing areas, and the southern portion of the drill box. The nature of the soils and disturbances encountered in the field suggests the entirety of the site consists of dredge spoil and wake-deposited shell from resulting from heavy ship traffic in the Houston Ship Channel. Previous investigations have concluded that the entirety of the southern half of Hog Island, including the landform that site 41HR681 is situated on, is the result of dredge spoil deposited sometime after 1920, and that any cultural material recovered is the result of secondary deposition. Furthermore, the area that the site now occupies was probably frequently, if not always, submerged under at least a few feet of water. Field observations on the site supporting these conclusions revealed disturbed soils overlaying organic, silty deposits consistent with estuarine muck that...
likely represented the original, submerged bay bottom. As such, it is highly unlikely that intact archeological sites might be located beneath the dredge spoil soils and within the original marsh horizon adjacent to the original course of the San Jacinto River.

A total of four shovel tests were conducted within the survey area, all of which were culturally sterile. In addition, the depth of three of the shovel tests was extended using a hand auger, reaching beneath the dredge spoil soils and into the original marsh horizon on the west bank of the San Jacinto River at previously recorded site 41HR681. At 0.76 and 0.5 meter below the surface, the water table was encountered with organic, silty soils consistent with the original estuarine floor and tests were terminated. The depth of the dredge spoil soils was determined to be between 0.50 and 0.76 meter below ground level in the portion of the project area associated with site 41HR681. Due to the nature of the loose and unstable soils in these areas, Atkins has determined that exploratory trenching would be much too dangerous and would have a minimal likelihood of producing any cultural resource material. The two tests in the proposed drill box outside of the site area revealed an elevated area consisting of buried oyster bed, with evidence of it having been dredged and deposited there at some point, withstanding the natural subsidence much more so than the sand and clay deposits that surrounded it. These tests on top of and on the rear of the low rise were also entirely absent of cultural material, and support the hypothesis that the entire area of site 41HR681 was submerged until dredge spoil deposition began roughly after 1920. As such, it is Atkins' professional opinion that it is highly unlikely that intact, significant cultural resources will be encountered during the construction activities associated with the HDD drill box and stringing area on Hog Island. Atkins submits a recommendation that cultural resource surveys be considered complete for the proposed Cedar Bayou to Morgan's Point Pipeline Project and that construction of the proposed project should be allowed to proceed without any further investigations. Should any cultural resources be encountered during HDD drilling activities associated with the proposed project on Hog Island, construction should cease immediately at that location until a qualified professional archaeologist can assess the significance of the findings.
Contents

Management Summary ................................................................................................................................. ii

I. DEFINITION OF THE STUDY AREA ........................................................................................................ 1

II. RESEARCH DESIGN .............................................................................................................................. 5

III. RESULTS ............................................................................................................................................... 6

   RECORDS SEARCH .......................................................................................................................... 6

   PEDESTRIAN SURVEY ...................................................................................................................... 7

IV. CONCLUSIONS AND RECOMMENDATIONS .................................................................................... 12

V. REFERENCES .......................................................................................................................................... 13

Figures

   1 Project Vicinity Map ............................................................................................................................ 2

   2 Aerial Survey Area Map Showing Shovel Tests ............................................................................. 3

   3 Topographic Survey Area Map Showing Shovel Tests .................................................................. 4

   4 Marsh with forested low rise and proposed drillbox location ....................................................... 8

   5 Dredge spoil (currently inundated), stringing areas ......................................................................... 9

   6 Articulated oyster shell in dredged shell deposits in proposed drill box ........................................ 11

Tables

   1 Shovel Test Data from Field Investigations .................................................................................... 10
I. DEFINITION OF THE STUDY AREA

In August 2013, Atkins North America, Inc. (Atkins), on behalf of Enterprise, conducted a cultural resources survey of the proposed Cedar Bayou to Morgan's Point Pipeline Project in Harris and Chambers Counties, Texas. The portion of the project area that was surveyed for cultural resources under Texas Antiquities Permit No. 6614 was on Hog Island, owned by the Port of Houston Authority (PHA). The project area is located at the mouth of the San Jacinto River immediately north of Atkinson Island, east of Morgan's Point, and northwest of La Porte, Texas (Figure 1). The proposed two new main line 20-inch diesel pipelines are approximately 12.88 kilometers (8 miles) in length and two new 20-inch auxiliary diesel pipelines are each approximately 4.83 kilometers (3 miles) in length, paralleling a section of the main lines. However, the impact to Hog Island is limited to approximately 2.92 acres, all of which were surveyed for cultural resources.

The area surveyed for cultural resources included the location of a proposed horizontal directional drill (HDD) drill box and associated pipe-stringing areas. These areas consist of both temporary and permanent workspaces associated with the proposed pipeline construction, and vary in width as appropriate (Figures 2 and 3). In total, approximately 2.92 acres were surveyed for cultural resources. No areas within the proposed construction activity areas were excluded from survey.

In addition to the Texas Antiquities Code, this investigation was initiated per General conditions 18 and 27 of Nationwide Permit 12 under Section 404 of the Clean Water Act. This study was performed in compliance with the National Historic Preservation Act of 1966 (PL 89-665), as amended; the National Environmental Policy Act of 1969 (PL 91-190, 83 Stat. 915, USC 4231, 1970); and in accordance with the Procedures for the Protection of Historic and Cultural Properties (36 CFR 800), as well as the guidelines set forth by the Council of Texas Archeologists (CTA) and the Register of Professional Archaeologists.

Because no new cultural resource sites were located during field surveys or during the revisit of site 41HR681, the duration of the field effort required less than one person-week to complete, and the area surveyed was small, Atkins has chosen to detail the investigation in a short report format following guidelines outlined by the CTA (1995).
Page removed as it contained site locations
not for public disclosure
Page removed as it contained site locations
not for public disclosure
II. RESEARCH DESIGN

The primary goals of this investigation were to (1) locate any cultural resources that may exist within the survey area of the proposed project; (2) assess their potential for National Register of Historic Places (NRHP) eligibility; (3) assess the effect of the proposed construction on cultural resources; and (4) provide site-specific recommendations for mitigation of adverse impact to any NRHP-eligible properties or properties with an unknown eligibility.

Prior to the field investigation, Atkins conducted a records search at the Texas Archeological Research Laboratory (TARL), the Texas Historical Commission’s (THC) on-line Restricted Archeological Sites Atlas, and the National Park Service’s NRHP database and GIS Spatial Data, as well as the National Historic Landmarks (NHL) Program, in order to identify any previous cultural resource investigations and/or previously recorded sites within 610 meters (m) [2,000 feet [ft]] of the project area.

The survey area was subjected to an intensive 100 percent pedestrian survey. Shovel tests were excavated judgmentally in areas of low surface visibility or perceived potential for buried deposits. Auger probes were conducted, three in conjunction with shovel tests in areas where it was thought that the original marsh horizon might be reached. The minimum number of shovel tests recommended in state guidelines for projects of this size was not met due to the presence of large, low-lying and frequently or currently inundated areas that the project crosses and the nature of the soils and disturbances.

Additionally, the survey area and adjacent areas were inspected for nonarcheological historic resources including any historic buildings or structures.
III. RESULTS

RECORDS SEARCH

A review of the files and maps at TARL, the THC's on-line Restricted Archeological Sites Atlas, and the National Park Service's NRHP database and GIS Spatial Data, as well as the NHL Program, identified previously recorded archeological sites 41HR681, 41HR682, and 41HR685 located within 2,000 ft (610 m) of the proposed project area. Site 41HR681 was found to be located within the boundaries of the proposed project area.

Site 41HR685 (known as San Jacinto River East) is a multicomponent shell midden site that has been determined ineligible for inclusion in the NRHP. The site is located on Atkinson Island, across the Cedar Bayou Ship Channel from site 41HR681 on Hog Island. The site sits atop what originally was the north end of the island approximately 900 ft (274 m) from the southwestern portion of the proposed project area. The site location is now largely situated in the eastern portion of the Houston Ship Channel and in the southern portion of the Cedar Bayou Ship Channel, as a result of dredging maintenance of these ship channels and erosion caused by ship traffic. The site is noted as containing both prehistoric ceramic materials and historic remnants of the New Washington townsite (established in 1834 and destroyed by the Mexican Army during the Texian Revolution in 1836) (Takac et al. 2000). An unknown amount of Goose Creek unincised common ceramic sherds were also documented. The site was observed as exposed along the bank of the ship channels and was approximately 1,825 ft (556.34 m) in length (THC Historic Sites Atlas 2013a). Originally identified in 1990 by members of the Houston Archaeological Society during the Galveston Bay Archaeological Survey, it was reassessed for TARL in 1997, where it was found that all prehistoric materials likely came from disturbed or secondary context. Furthermore, cartographic and aerial photographic data clearly indicated that any intact historic deposits are now submerged up to 1 m due to subsidence associated with continued erosion from ship traffic wake and hurricane storm surges (Takac et al. 2000).

Site 41HR682 (known as Hog Island NE) is located on the north side of Hog Island on Tabbs Bay, 1,478 ft (450.7 m) north of the survey area. This site is a prehistoric shell midden site that, as of August 5, 2013, has an undetermined eligibility for inclusion in the NRHP. However, no further work was recommended. The site is located on the eastern edge of Hog Island, 1,285 ft (391 m) north of 41HR681, bordering Tabbs Bay. The site was originally situated on the northeast end of the island, but due to subsidence it is now entirely submerged. The site was identified in 1990 by members of the Houston Archaeological Society during the Galveston Bay Archaeological Survey (THC Historic Sites Atlas 2013). Site 41HR682 was noted as containing an unknown amount of Goose Creek unincised common ceramic sherds. The site was observed as exposed along the bank of Tabbs Bay and is approximately 600 ft (182.9 m) in length (THC Historic Sites Atlas 2013b). The initial investigation found that none of the site remained intact and it had no potential for either state archeological landmark designation or nomination to the NRHP.
Site 41HR681 (known as San Jacinto River West) is a prehistoric shell midden site that has been determined ineligible for inclusion in the NRHP. The site is located on the southern tip of Hog Island, across the Cedar Bayou Ship Channel from site 41HR685 on Atkinson Island. The site sits atop dredge fill that was deposited on top of the original, natural tidal marsh. Apparently, the shell has been naturally deposited along the southern and western shoreline by ship traffic wake resulting from commerce through the Houston Ship Channel. Due to the widening of the Houston Ship Channel and subsidence resulting from commerce, the western 865 ft (263.5 m) of the site is now submerged in the Houston Ship Channel. The site was noted as containing both prehistoric ceramic sherds, historic remnants of a service road and drilling platform from as early as 1956 (Takac et al. 2000; THC Historic Sites Atlas 2013c). An unknown amount of Goose Creek nonincised common ceramic sherds were documented during pedestrian survey by the Houston Archaeological Society during the Galveston Bay Archaeological Inventory in 1990. The site was observed as exposed along the bank of the ship channel and was approximately 2,500 ft (644.21 m) in length, extending 75 ft (22.86 m) into the island (THC Historic Sites Atlas 2013c). The site was reassessed for TARL in 1997 by Espey, Huston and Associates, Inc., where it was found that all prehistoric materials likely came from disturbed or secondary context (Schmidt and Foster 1997). In 2000, the site was reassessed, and cartographic and aerial photographic data clearly indicate that the southern portion of Hog Island where site 41HR681 is located did not exist before deposition of dredging material began circa 1905. It was determined that this area was open water before this time, and the southern portion of Hog Island where the site is located represents abnormal conditions that buried natural estuarine grasses (Takac et al. 2000).

PEDESTRIAN SURVEY

The survey area generally consists of relatively open marsh and low-lying and frequently or currently inundated dredge deposits, with a small section of wooded Gulf Coast prairie atop a low rise where the proposed drill box is located (Figure 4). Vegetation within the proposed project area consists primarily of marsh grasses, with Chinese tallow, yaupon, and small oaks in the proposed drill box portion. Ground surface visibility ranged from zero to 50 percent at the time of the survey.

The soil series within which the survey area falls has been mapped as consisting of only Ijam soils (Natural Resources Conservation Service 2013). These soils are characterized as deep and poorly drained deposits with low permeability. They are formed from materials dredged during widening modification of rivers, bays, and canals. The Ijam series typically has 1 percent slope or less but can range from 0 to 10 percent. Abbott (2001) describes these soils as having no geoarcheological potential as they are secondarily deposited. However, due to the presence of previously recorded sites within the proposed project’s survey area and immediate vicinity, shovel tests were performed to confirm the absence of any deposits potentially buried in the Holocene estuarine deposits below the Ijam series dredge fill. The Ijam deposits potentially extend to 203 centimeters below the surface (cmbs); however, Hog Island’s dredge deposits have been particularly susceptible to subsidence and are therefore thinner. The Ijam sits on top of Holocene estuarine deposits of

Atkins 130035048/130096

7
unknown thickness, which are a part of the Pleistocene Beaumont formation (Blum, Aslan 2006). A small bucket auger was brought to attempt to reach deposits beneath the dredge material. However, the organic estuarine deposits at the bottom of the shovel tests were either too unstable to continue the tests any further, or the concentration of calcitic mud and oyster shell made utilization of the auger impractical. The coastline consists of a large amount of shell deposited as the result of Houston Ship Channel commerce wake. The project area is also covered with modern debris from storm surge events. The majority of the project area has been subject to over 100 years of dredge spoil deposits in addition to disturbances associated with oil and gas facilities, as evidenced by the mottled soils encountered while conducting shovel tests. The proposed project area was 100 percent pedestrian surveyed for prehistoric and historic cultural material.

Figure 4. Marsh with forested low rise and proposed drill box location, facing north.

The proposed eastern and southern stringing areas lie entirely within known dredge deposits consisting of clays and recently deposited sand, silt, and shell (Schmidt and Foster 1997; Takac 2000). Shovel tests were only viable in the dryer areas at the extreme eastern and southern margins of the proposed stringing areas (see Figures 2 and 3; Shovel Tests [ST] 1 and 4) due to the low-lying and frequently or currently inundated areas that occupied the remainder of these areas (Figure 5). Both tests observed a mix of modern trash with disturbed clays, sands, and shell
Figure 5. Dredge spoil (currently inundated), stringing areas, facing southeast.

deposits overlaying organic estuarine sediments of unknown thickness, in emergent marshlands present at the mouth of the San Jacinto River before the accumulation of dredge spoil began. The survey area extends to the shell beach where large, rolling waves resulting from massive container and tanker ship commerce through the ship channel were observed depositing new shell and debris during the field investigations. The two proposed stringing areas that were tested bisect the eastern and southern portions of site 41HR681. Shovel testing (Table 1) and field observation are consistent with conclusions by Schmidt and Foster (1997) and Takac et al. (2000) that there is no evidence supporting interpretations by the 1990 investigation of Hog Island regarding any kind of intact prehistoric site presence or potential research value. Any prehistoric artifacts observed in 1990 on the shore were probably secondarily deposited from dredged areas of unknown origin. No prehistoric or historic material was observed within the proposed eastern and southern stringing areas.

The terrain associated with the central portion of the proposed project area where the proposed drill box would be located consists of a low rise and is the only portion of the survey area that is not subject to frequent or constant inundation. This area is not associated with any archeological site and is situated approximately 200 ft (60.25 m) northwest of site 41HR681 and 1,541 ft (470 m) south of site 41HR682. This area was tested at its highest point, in the center, and found to consist of oyster shell, marl, and calcitic mud that was manually impenetrable past 25 centimeters below
Table 1. Shovel Test Data from Field Investigations

<table>
<thead>
<tr>
<th>Shovel Test Number</th>
<th>Area of Proposed Construction</th>
<th>Test Depth (cmbs)</th>
<th>Soil Characteristics</th>
<th>Artifacts Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1, SST1</td>
<td>Eastern proposed stringing area, northern portion of site 41HR681</td>
<td>0–76</td>
<td>10YR5/1, 10YR 6/6, 10YR5/6, gley 3/1; sandy clay, sand and silt; mottled</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>76–104</td>
<td>Gley 3/1 Organic material and silt</td>
</tr>
<tr>
<td>ST2</td>
<td>Proposed HDD drill box</td>
<td>0–5</td>
<td>10YR 8/1, 10YR 6/6; silty sand and some oyster grit</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5–25</td>
<td>10YR 8/1, 10YR 6/6; oyster grit and some silty sand, lots of oyster shells</td>
<td></td>
</tr>
<tr>
<td>ST3</td>
<td>Proposed HDD drill box</td>
<td>0–60</td>
<td>10YR 5/1, 10YR 6/6, 10YR 5/6; mottled sandy clay, sandy silt, and sand</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60–74</td>
<td>10YR 6/2; sand</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>74–92</td>
<td>10YR4/1, 10YR 8/1; silt and oyster grit, calcitic mud</td>
<td></td>
</tr>
<tr>
<td>SST2, ST4</td>
<td>Southern proposed stringing area, southern portion of site 41HR681</td>
<td>0–12</td>
<td>10YR 4/2, 10YR 2/1, 10R 5/6; mottled sandy clay, sand and silt</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12–50</td>
<td>10YR 6/2, 10YR 3/2, 10R 5/6; mottled sand, silt, clay</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50–60</td>
<td>Gley 3/1; organic material and silt</td>
<td></td>
</tr>
</tbody>
</table>

III. Results

the surface (cmbs) (see Figures 2 and 3; ST 2). There was a mixture of oyster shell that had died in living position, as well as disarticulated oyster shell with disarticulated *Rangia* shells that appeared to have been washed in resulting in edge rounding. ST 3 was placed on the north side of this low landform and encountered 75 cm (29 inches) of soil identical to the dredge fill on the southern portion of the survey area and Hog Island (see Figures 2 and 3). This dredge material overlay dense marl, calcitic mud, and shell deposit that was impenetrable by manual shovel testing past 92 cmbs. The water table was not reached, nor was the estuarine organic silt that this deposit overlaid. Cartographic maps from both 1851 and 1930 show that this portion of Hog Island did not exist before the adjacent areas began to be channelized and dredged (Schmidt and Foster 1997; Takac 2000). This deposit likely represents the dumping site of a dredged natural oyster bed as evidenced by the articulated oyster shells that died in living position (Figure 6). While the remaining dredge piles would have been subject to subsidence from the frequent inundation and erosion from storm surge and ship channel commerce, this shell deposit appears to have subsided much less. No prehistoric or historic cultural materials were observed within this portion of the proposed project area.
The years of dredge spoil deposits that comprise the southern portion of Hog Island have completely covered the original marshlands, making the identification of any submerged archeological sites along the shore unlikely. Additionally, the shore of Hog Island before the commencement of dredge deposition lies approximately 2,000 ft (610 m) north of the project area, minimizing the possibility of any unidentified shell midden or otherwise shell-bearing sites being impacted.

A total of four shovel tests were conducted within the survey area, all of which were culturally sterile. The depth of the dredge spoil soils was determined to be between 50 and 75 cm in the stringing areas, with silty, organic estuarine deposits below. The depth of the dredge deposit was not determined within the survey area of the proposed HDD drill box due to the presence of manually impenetrable calcitic mud and concretions.

There were no nonarcheological historic resources or combinations of resources that appeared to be NRHP eligible within or adjacent to the survey area.
IV. CONCLUSIONS AND RECOMMENDATIONS

The pedestrian survey of the proposed Cedar Bayou to Morgan's Point Pipeline Project, within parcel TX-HR-0004.00000 (Hog Island), Harris County, resulted in finding no cultural resources. Also there were no nonarcheological historic resources or combinations of resources that appeared to be NRHP eligible within or adjacent to the survey area.

No artifacts were observed upon the ground surface of the survey area or in any of the shovel tests conducted. As stated previously, the minimum number of shovel tests recommended in the CTA guidelines for projects of this size was not met due to the nature of the soils, the presence of low-lying and frequently or currently inundated areas, and disturbances within the survey area.

The proposed depth of impacts associated with construction in this location is approximately 21 m (70 ft) below surface in the area of the proposed HDD drill box only. Impacts in the two stringing areas emanating from the proposed HDD drill box will be limited to vegetation-clearing activities. Shovel tests were able to reach a depth of approximately 1.04 m (3.41 ft) below surface and locate original estuarine silty, organic marsh floor. Because of the wet and unstable nature of the sandy dredge deposits that comprise this project's survey area, Atkins has determined that exploratory trenching is much too dangerous and would not result in any productive results. Atkins recommends that the proposed Cedar Bayou to Morgan's Point Pipeline Project within parcel TX-HR-0004.00000 (Hog Island) cultural resource surveys be considered complete, and that the proposed project's construction activities should be allowed to proceed without any further investigations.

As indicated above, no new cultural resources sites were documented within the survey area and no artifacts were collected during the survey. No artifacts were recovered during the 41HR681 revisit. The presence of dredge spoil soils and deposits that comprise the survey area associated with the construction of the Houston Ship Channel, Cedar Bayou Ship Channel, and oil and gas facilities make the probability for stratigraphically intact archeological sites existing in the survey area extremely low. Therefore, it is Atkins' opinion that the proposed construction activities associated with the survey area are not likely to adversely impact significant cultural resources and the project should proceed as planned.

If, during construction, previously unrecorded cultural resources are encountered, all activities at the location should be halted and a qualified cultural resources specialist should be contacted to assess the findings and to provide a course of action for the newly discovered cultural remains.
V. REFERENCES

Abbott, James T.  

Blum, Michael D., Andres Aslan  

Council of Texas Archeologists  

Natural Resources Conservation Service  

Schmidt, J., and E. Foster  

Takac, Paul R., Jeffrey G. Paine, and Michael B. Collins  
2000 *Reassessment of Ten Archaeological Sites along the Houston Ship Channel-Morgan’s Point to Buffalo Bayou,* Harris County, Texas. Studies in Archaeology Report Number 38, Texas Archeological Research Laboratory, The University of Texas at Austin.

Texas Historical Commission Historic Sites Atlas  

